

DOCUMENT RESUME

ED 064 778

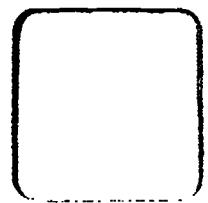
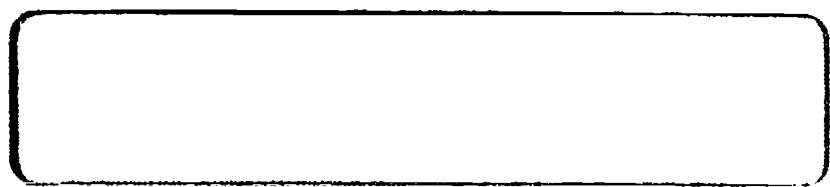
24

EA 004 428

AUTHOR Mahan, James M.  
TITLE How To Plan a Curriculum Demonstration Day.  
INSTITUTION Eastern Regional Inst. for Education, Syracuse,  
N.Y.  
SPONS AGENCY National Center for Educational Research and  
Development (DHEW/OE), Washington, D.C.  
REPORT NO Program-R-107  
BUREAU NO BR-6-2875  
PUB DATE Jan 70  
CONTRACT OEC-3-7-062875-3056  
NOTE 52p.  
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS \*Curriculum Planning; \*Demonstration Programs;  
\*Demonstrations (Educational); Educational  
Innovation; \*Elementary School Science; Evaluation;  
Instructional Materials; \*Program Planning; Science  
Curriculum

ABSTRACT

This report provides some guidance and materials that could be useful to those considering planning and conducting a curriculum demonstration day in a local school. These materials were used successfully in ERIE's pilot school, and they demonstrate a fully implemented elementary school science curriculum. Included in the document are a checklist of tasks for planning and conducting a demonstration day, sample letters of invitation, sample programs, sample evaluation forms for participants, a followup assessment plan, and a list of outside resources useful in the planning of a curriculum demonstration day. (RA)



Published by the Eastern Regional Institute for Education, a private non-profit corporation supported in part as a regional educational laboratory by funds from the United States Office of Education, Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

ED 064778

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
OFFICE OF EDUCATION  
THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIG-  
INATING IT. POINTS OF VIEW OR OPIN-  
IONS STATED DO NOT NECESSARILY  
REPRESENT OFFICIAL OFFICE OF EDU-  
CATION POSITION OR POLICY

**Program Report 107**

**How to Plan a  
Curriculum Demonstration Day**



James M. Mahan

January 1970

Eastern Regional Institute for Education  
635 James Street  
Syracuse, New York 13203

EA 004 428

## TABLE OF CONTENTS

	page
FOREWORD. . . . .	1
Acknowledgements. . . . .	2
WHY PLAN A CURRICULUM DEMONSTRATION DAY? . . . . .	5
PLANNING A DEMONSTRATION DAY:	
IDEAS AND MATERIALS . . . . .	9
Checklist of Tasks for Planning and Conducting a Demonstration Day . . . . .	10
The Letter of Invitation. . . . .	13
Sample Letter 1 . . . . .	14
Sample Letter 2 . . . . .	17
Sample Letter 3 . . . . .	21
The Program . . . . .	24
Sample Program 1. . . . .	26
Sample Program 2. . . . .	28
Sample Program 3. . . . .	30
Sample Program 4. . . . .	31
Sample Program 5. . . . .	32
Sample Program 6. . . . .	33
Participant Evaluation. . . . .	35
Sample Evaluation Form 1. . . . .	36
Sample Evaluation Form 2. . . . .	38
Follow-Up Assessment. . . . .	41
OUTSIDE RESOURCES FOR A DEMONSTRATION DAY ON <u>SCIENCE--A PROCESS APPROACH</u>	
Agencies. . . . .	43
1968-69 Demonstration Day Schools . . . . .	44
RAN Consultants . . . . .	46
Sources of Handout Materials. . . . .	47
Bibliography. . . . .	48

## FOREWORD

The Eastern Regional Institute for Education (ERIE), a regional educational laboratory supported by the Office of Education, is dedicated to the promotion of process-oriented education in the nation's schools. In one program, the Institute is helping elementary schools with the installation of process-oriented science curricula. Concurrently, the Institute is working with other agencies to develop strategies to promote the widespread adoption of process curricula.

In 1967 the Institute introduced Science--A Process Approach, an innovative science curriculum developed by the American Association for the Advancement of Science, in 21 pilot schools in New York and Pennsylvania. The impact of this curriculum installation became apparent when personnel from non-pilot school districts and educational agencies inquired about the program and requested opportunities for on-site visits. In response to this interest, ERIE influenced the organization of 14 curriculum demonstration days during the 1968-69 school year. The accomplishment required the leadership and collaboration of classroom teachers, school principals, and regional Title III personnel. The 14 "days" attracted more than 1400 teachers and administrators who came to see Science--A Process Approach presented "live" to elementary school children during regular

instructional time. The visitors were inquisitive, discussing with pilot school personnel the characteristics, challenges, and rewards of process science. Many participants were instrumental later in implementing plans for classroom tryouts of Science--A Process Approach in their school districts, for promoting attendance at summer inservice education workshops, and for procurement of related hardware and software.

The purpose of this report is to provide guidance and materials useful in planning and conducting a curriculum demonstration day in the local school. The materials were used successfully in ERIE's pilot schools. Consequently, they reflect the focus on Science--A Process Approach.

#### Acknowledgements

A number of forms, letters, schedules, and other materials prepared and used by school and agency personnel are presented on the blue pages in this volume. The Institute acknowledges and cordially thanks the schools and agencies listed below for permission to share their materials with educators contemplating demonstration day programs.

#### Schools

Allegheny County Schools  
345 County Office Bldg.  
Pittsburgh, Pennsylvania 15219  
Fred C. Krause  
Assistant Superintendent

**Acknowledgements (cont'd)**

Calvin U. Smith School  
Stanton Street Extension  
Painted Post, New York 14870  
Donald Mahon, Principal

C.C. Ring Elementary School  
400 Buffalo Street  
Jamestown, New York 14701  
John Carlson, Principal

J. Henry Cochran Elementary School  
1500 Cherry Street  
Williamsport, Pennsylvania 17701  
John E. Dice, Principal

Maple Elementary School  
1500 Maple Road  
Williamsville, New York 14221  
Thomas Ahern, Principal

Overlook Elementary School  
Meadowgreen Drive  
Pittsburgh, Pennsylvania 15236  
Howard Robertson, Principal

Ticonderoga Elementary School  
Alexandera Avenue  
Ticonderoga, New York 12883  
Mabel Hornburg, Principal

Washington Elementary School  
Sunbury Street  
Shamokin, Pennsylvania 17872  
Lyman Weaver, Principal

Westmere Elementary School  
Johnston Road  
Albany, New York 12303  
James Cleary, Principal

Acknowledgements (cont'd)

Title III Agencies

Capital District Regional Supplementary  
Education Center  
815B Central Avenue  
Albany, New York 12206  
Donald Hess, Director  
Charles A. Ebetino, Curriculum Specialist

Northeast Regional Supplementary Education  
Center  
8 South Platt Street  
Plattsburgh, New York 12901  
Joseph Allen, Director  
W. Harvey Davey, Associate Director

Project Innovation  
27 California Drive  
Williamsville, New York 14221  
Robert Lamitie, Director  
Jack Hanssel, Assistant Director

## WHY PLAN A CURRICULUM DEMONSTRATION DAY?

Innovative curricula must battle in the educational marketplace for the acceptance, loyalty, and fiscal resources of various educational consumers. Teachers and administrators learn about innovative instructional materials, methods, and objectives through professional journals, professional contacts, professional meetings, and in various other ways. But knowledge alone seldom seems to provide school personnel sufficient impetus for discarding routine, comfortable, old approaches to instruction in favor of a different, challenging, emergent curriculum still unevaluated in terms of personal experience.

Most educators desire to view a new instructional product in action--to see its proponents and early implementers "do their thing." They pose a question similar to the one asked by many American citizens when they first heard about the innovation known as the automobile: "Will that contraption really run?" Automobile agencies still employ "demonstrator" vehicles to motivate consumers to make purchases, to change models. "Seeing is believing" remains an important tenet in the decision-making process. Demonstrator models are necessary in the world of the school, as well as in the world of the automobile. Several educators, concerned with the problems of promoting educational innovation during a half century characterized by bewildering

social and technological change, stress the importance of demonstrating new curricula in action. Henry Brickell(1) comments:

The only way to judge a new program is to visit it. ...It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is helpful. A talk with students can be even more revealing. ...Recommended new programs must be demonstrated in schools quite similar to those from which visitors come.

Clark and Guba(2) identify demonstration as an essential component of a classification scheme of processes necessary for educational change. They point out that demonstration provides an opportunity for potential users to examine and assess operating qualities of the invention. Through examination and assessment, conviction about the innovation is developed. Change agencies and local school district demonstration centers should collaborate to form networks for expanded programs of direct demonstration of innovations(3).

While discussing PSSC Physics, Marsh(4) underscores the importance of the observation of curriculum results in classroom situations and the value of exchanges of opinion with fellow teachers.

Rogers and Svenning(5) state that:

Communication between schools about innovations tends to be limited. Teachers rarely have the opportunity to visit other schools while they are in session to see innovations in actual operation. This is particularly difficult in rural areas where schools are often quite far apart. ...Teachers sent to other school systems for observation often return with new enthusiasm, which they may impart to other faculty members.

Classroom teachers are the ultimate implementers of any instructional program--they collect and arrange the materials, plan the learning experiences, monitor student activity, field student questions, evaluate the learner's achievement, re-teach if necessary, and plan again for tomorrow. Since the teacher is the one who knows most about the operating characteristics of a curriculum, she should be given a leadership opportunity to disseminate a good program beyond the walls of her classroom.

Innovative teachers in elementary schools implementing new process-oriented curricula, e.g., Science--A Process Approach, are a powerful and under-utilized force for the dissemination of new instructional methods. Fellow teachers are interested in seeing innovative teachers at work with new materials in a regular classroom setting with average pupils. When visitors are convinced that a new program really "works," they return home willing to try similar methods. It is for this reason in particular that curriculum demonstration days conducted by teaching staffs and the principal are a most important means for the dissemination of educational change.

#### References

1. Henry M. Brickell, Organizing New York State for Educational Change. Albany: The State Education Department, 1961, p. 28.

## References (cont'd)

2. David L. Clark and Egon G. Guba, An Examination of Potential Change Roles in Education. (Seminar on Innovation in Planning School Curricula) October 1965, p. 8.
3. Clark and Guba, 1965, p. 29.
4. Paul E. Marsh, "Wellsprings of Strategy; Considerations Affecting Innovations by the PSSC." in Innovation in Education. Matthew B. Miles, New York: Teachers College, Columbia University, 1964.
5. Everett M. Rogers and Lynne Svenning, Change in Small Schools. Las Cruces, New Mexico: Education Resources Information Center Clearinghouse on Rural Education and Small Schools, New Mexico State University, 1969.

## PLANNING A DEMONSTRATION DAY: IDEAS AND MATERIALS

Careful planning is essential to an effective, well-attended demonstration day. The program should offer visitors a variety of opportunities to learn about the new curriculum and the school's experiences with it. Participants will want to inspect the materials; they will want to observe teachers in the classroom; they will want to discuss the curriculum with involved teachers and administrators.

To assist the planner, ERIE has brought together in the sections following the ideas and materials used in conducting 14 demonstration days for Science--A Process Approach. The first section is a checklist of tasks and personnel responsible for completing tasks--the host school, the regional agency, the host principal, the host staff, the participants, and the speaker.

Sufficient advance planning and information are essential to insure maximum participation. Letters of invitation should be designed to stimulate the active interest of the recipient. This is presented in the second section below.

Visitors should be requested to evaluate the demonstration day experience. Evaluation is treated in the third section; the final section is a brief discussion of follow-up assessment.

Checklist of Tasks for Planning and  
Conducting a Demonstration Day

Key: Responsible Party for Checklist of Tasks

School	elementary school conducting the demonstration day program
Agency	any change agency or intermediate agency (i.e. regional Title III Center, Board of Cooperative Educational Services, School Study Council, etc.) publicizing a demonstration day and assisting in its implementation and evaluation
Principal	principal of the school conducting the demonstration day
Staff	teachers demonstrating the innovative curriculum to participants
Participants	teachers, administrators, and other educators attending the demonstration day program
Speaker	science professor or outside consultant serving as "keynoter" or resource person at request of principal and his staff

<u>TASKS</u>	<u>RESPONSIBLE PARTY</u>
— Consider rationale for demonstration day	principal, staff, agency
— Secure voluntary cooperation of staff	principal
— Secure coordinated supportive efforts of the change agency (i.e., Title III)	principal
— Collaborate with teachers to construct a demonstration day schedule	principal
— Include a variety of realistic instructional experiences	principal, staff
— Determine enrollment, length of program, lunch hours and prices, etc.	principal

## Checklist of Tasks (cont'd)

<u>TASKS</u>	<u>RESPONSIBLE PARTY</u>
— Give agency logistical facts to include in publicity	principal
— Arrange for speaker presence if desired by principal	agency
— Prepare (obtain) one descriptive article or brochure for advance distribution to participants	agency
— Mail invitational brochures at least 3 weeks in advance, handle publicity and construct registration forms, mail forms	agency
— Mail above mentioned brochure to registrants (in advance)	agency
— Arrange for newspaper or television publicity	agency (or school)
— Prepare list of registrants	agency
— Prepare an agendum (schedule) for distribution to participants	principal
— Prepare detailed lesson plans for instructional sessions to be observed	staff
— Prepare a demonstration day evaluation form	agency, principal
— Welcome participants, explain demonstration day schedule, distribute agendum, provide map of the school	principal
— Require participants to sign visitors log, indicate their school and district	principal
— Teach before visitors, handle questions, encourage dialogue	staff

## Checklist of Tasks (cont'd)

<u>TASKS</u>	<u>RESPONSIBLE PARTY</u>
<u>Hold a "de-briefing" for all participants</u>	principal, staff, agency, speaker
<u>Distribute "take home" handouts (program descriptions, prices, teacher reactions, etc.)</u>	principal
<u>Evaluate the demonstration day</u>	participants
<u>Provide stipend for speaker</u>	agency
<u>Thank staff and agency for for demonstration day efforts</u>	principal, agency
<u>File copy of visitors log</u>	agency
<u>Score and analyze evaluation forms</u>	agency
<u>Investigate regional "spin off" from demonstration day</u>	agency

The Letter of Invitation

Advance information or "advertising" is essential to insure maximum participation. The letter of invitation should be designed to stimulate the active interest of the recipient.

Regional Title III Centers and ERIE collaborated in 1968-69 to help innovative schools conduct demonstration day programs. Letters of invitation were mailed by Title III Regional Center personnel to elementary school principals, teachers, science supervisors, and selected central office administrators.

Three sample letters, along with registration forms, are included below to guide schools and agencies interested in conducting a demonstration day program.


**EASTERN REGIONAL INSTITUTE FOR EDUCATION**

EDUCATIONAL LABORATORY

635 JAMES STREET, SYRACUSE, N.Y. 13203

 TELEPHONE  
 474-5321  
 AREA CODE 315

October 21, 1968

**To:** Elementary School Principals and Teachers,  
 Science Supervisors and Coordinators, and  
 Central Office Administrators of the Capital Area

**From:** Capital District Regional Supplementary Education  
 Center and Eastern Regional Institute for Education

**Subject:** Westmere Elementary School (Guilderland School  
 System) Demonstration and Diffusion Day for  
Science--A Process Approach

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry oriented, process based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 6 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives--another very current development in American education.

ERIE has received numerous requests for information about Science--A Process Approach, for suggestions as to sources of in-service training of teachers, and for opportunities to see the curriculum in normal use in a typical elementary school.

Letter 1 (Cont'd)

Efforts are underway to schedule Demonstration and Diffusion Days in several of the pilot schools between now and May 1. Westmere Elementary School has volunteered to host visitors on two days, December \_\_\_\_ and December \_\_\_\_.

ERIE feels that process approach is a major educational innovation with great potential for American boys and girls. The Capital District Regional Supplementary Education Center shares that belief. In the past, the two agencies have co-sponsored a meeting in the Capital area to describe the characteristics of Science--A Process Approach. Through collaborative efforts, ERIE and the Capital District Regional Supplementary Education Center hope to forge the linkages or connections of cooperation between and among educational agencies so that school districts may learn more quickly of promising innovations and may assess them in a natural setting.

One notes that Clark and Guba call for demonstration of operational innovations as one of a series of processes necessary for change in education. Opportunities to examine and assess operating qualities are provided through demonstration. Often observer conviction is developed or strengthened.

Henry Brickell in Organizing New York State for Education Change has strongly emphasized:

"The only way to judge a new program is to visit it. -----It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is helpful. A talk with students can be even more revealing. -----Recommended new programs must be demonstrated in schools quite similar to those from which visitors come."

If you think Westmere Elementary School is sufficiently comparable to your elementary school, Westmere hereby invites you and your team to visit from 8:30 a.m. to 3:30 p.m. on Demonstration and Diffusion Day. Mr. James Cleary, Principal, will plan a visitation schedule providing for:

- a. Observations of "regular" Science--A Process Approach lessons taught in grades K-3 just as they are taught every day at Westmere.
- b. An opportunity to talk to, or question, each teacher observed.
- c. An opportunity to question the pupils observed.

Letter 1 (Cont'd)

- d. Inspection of science kits and teacher guides that are a component of the curriculum.
- e. An opportunity to witness the administration of a competency measure (unit test).
- f. Plenty of time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
- g. A short talk by a professor of science education on "process" as content, and pre-service and in-service training.
- h. Comments on the psychological and philosophical undergirdings of the curriculum.
- i. A give-and-take session between visitors, principal, and several teachers.
- j. A well-written summary article on Science--A Process Approach to be taken home.
- k. Lunch in the school cafeteria.

Educators interested in elementary school science curriculum change are encouraged to spend a day at Westmere observing, inferring, formulating hypotheses, and interpreting data relative to process science. The day should permit some preliminary judgments about the educational significance of this curriculum for the learner, and the feasibility of its installation into your own school setting.

Factual information needed to organize the "Day" in the most satisfactory manner for visitors is requested on the registration form enclosed. You will notice that "team" attendance is strongly encouraged. An exemplary article on Science--A Process Approach will be forwarded for your professional reading after your registration is received. The article will make the visitation much more meaningful and will motivate a series of important questions to be directed toward the Westmere faculty.

Sincerely yours,

Charles A. Ebetino

James M. Mahan

/eh  
Encl.

## SAMPLE LETTER OF INVITATION 2

PROJECT INNOVATION  
27 California Drive  
Williamsville, New York 14221

TO: Elementary School Principals,  
Teachers, Science Supervisors,  
Coordinators and Central Office  
Administrators of the Western  
New York area.

FROM: Project Innovation and Eastern  
Regional Institute for Education  
(E.R.I.E.).

SUBJECT: Maple Road Elementary School,  
Williamsville Central Schools and  
C.C. Ring Elementary School,  
Jamestown Public Schools Demonstra-  
tion and Diffusion Day for Science--  
A Process Approach.

DATE: November 15, 1968

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry oriented, process based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 6 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives - another very current development in American education.

Letter 2 (Cont'd)

ERIE has received numerous requests for information about Science--A Process Approach, for suggestions as to sources of in-service training of teachers, and for opportunities to see the curriculum in normal use in a typical elementary school.

On Thursday, December 12, 1968 two of the pilot schools in Western New York have scheduled Demonstration and Diffusion Days. They are the Maple Road School in Williamsville and the C.C. Ring School in Jamestown.

ERIE feels that process approach is a major educational innovation with great potential for American boys and girls. Project Innovation shares that belief. Through collaborative efforts ERIE and Project Innovation hope to forge the linkages or connections of cooperation between and among educational agencies so that school districts may learn more quickly of promising innovations and may assess them in a natural setting.

If you think Maple Road Elementary School in Williamsville or C.C. Ring School in Jamestown are sufficiently comparable to your elementary school, they hereby invite you and your team to visit from 9:30 a.m. to 3:30 p.m. on Thursday, December 12, 1968. Mr. Thomas Ahern from Maple Road Elementary School in Williamsville and Mr. John Carlson from C.C. Ring in Jamestown have planned the following program:

- a. Observations of "regular" Science--A Process Approach lessons in grades K-3 taught as they are taught every day.
- b. An opportunity to talk to, or question, each teacher observed.
- c. An opportunity to question the pupils observed.
- d. Inspection of science kits and teacher guides that are a component of the curriculum.
- e. An opportunity to witness the administration of a competency measure (unit test).
- f. Plenty of time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
- g. A short talk by a professor of science education on "process" as content, and pre-service and in-service training.
- h. Comments on the psychological and philosophical undergirdings of the curriculum.
- i. A give-and-take session between visitors, principal, and several teachers.

Letter 2 (Cont'd)

- j. A well-written summary article on Science--A Process Approach to be taken home.
- k. Lunch in the school cafeteria.

Educators interested in elementary science curriculum change are encouraged to spend a day at either Maple Road School in Williamsville or C.C. Ring School in Jamestown observing, inferring, formulating hypotheses, and interpreting data relative to process science. The day should permit some preliminary judgments about the educational significance of this curriculum for the learner, and the feasibility of its installation into your own school setting.

Factual information needed to organize the "Day" in the most satisfactory manner for visitors is requested on the registration form enclosed. You will notice that "team" attendance is strongly encouraged. An exemplary article on Science--A Process Approach will be forwarded for your professional reading after your registration is received. The article will make the visitation much more meaningful and will motivate a series of important questions directed to the faculties of Maple Road and C.C. Ring schools.

Very truly yours,

Jack Hanssel  
Assistant Director  
Project Innovation

James M. Mahan  
Director  
Process Curriculum Installation  
Program  
Eastern Regional Institute for  
Education

JH/mae  
enclosure

Letter 2 (Cont'd)

**DEMONSTRATION AND DIFFUSION DAY**  
**FOR SCIENCE--A PROCESS APPROACH**  
**DATE - DECEMBER 12, 1968**

Name of School District: \_\_\_\_\_

Names of People Attending the Demonstration Day:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

Name of School at which you want to observe (Please check one)

1. Maple Road School (Williamsville) \_\_\_\_\_
2. C.C. Ring School (Jamestown) \_\_\_\_\_

Please return this form in the self addressed envelope to  
Project Innovation, 27 California Drive, Williamsville,  
New York, 14221, by MONDAY, DECEMBER 2, 1968.

**SAMPLE LETTER OF INVITATION 3**

ALLEGHENY COUNTY SCHOOLS  
345 County Office Building  
Pittsburgh, Pennsylvania 15219

TO: Chief School Administrators  
Elementary Principals

FROM: Fred C. Krause, Assistant Superintendent

SUBJECT: DEMONSTRATION DAY FOR SCIENCE--A PROCESS APPROACH

DATE: February 10, 1969

Recently Project SENARAC-R of the Allegheny County Schools conducted a Share the Wealth program with the Bethel Schools in which Science--A Process Approach was demonstrated. A number of schools have expressed further interest in this particular type of science curriculum.

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry-oriented, process-based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 5 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives - another very current development in American education.

---

**Letter 3 (Cont'd)**

The Overlook Elementary School, Baldwin-Whitehall School District, is one of ERIE's 21 pilot schools. r. Howard C. Robertson, principal of the Overlook Elementary School has planned a one-day program providing for:

- a. Observations of "regular" Science--A Process Approach lessons taught in grades K-4 as they are taught at Overlook School.
- b. An opportunity to talk to, or question, teachers who use the SAPA program.
- c. An opportunity to question the pupils observed.
- d. Inspection of science kits and teacher guides that are a component of the curriculum.
- e. An opportunity to witness the administration of the competency measure (unit test).
- f. Time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
- g. Comments on the psychological and philosophical undergirdings of the curriculum.
- h. A give and take session between visitors, principal, and several teachers.
- i. A well-written summary article on Science--A Process Approach to be taken home.

The meeting will be held Wednesday, March 5, 1969, at the Overlook Elementary School, Meadowgreen Drive, Pittsburgh, Pennsylvania 15236. The meeting will begin at 9:30 a.m. and conclude at approximately 3:30 p.m. Lunch will be on your own. An article dealing with Science--A Process Approach will be forwarded after your registration is received. The article will make the visitation more meaningful and will motivate a series of important questions to be directed toward the Overlook Elementary School faculty.

Reservations should be returned before February 26, 1969.

Letter 3 (Cont'd)

-----

Return to: Dr. Fred C. Krause  
Assistant Superintendent  
Allegheny County Schools  
345 County Office Building  
Pittsburgh, Pennsylvania 15219

The following persons will attend the Science--A Process Approach conference to be held at the Overlook Elementary School, Baldwin-Whitehall School District, on Wednesday, March 5, 1969.

<u>Name</u>	<u>Title</u>	<u>School Address</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

School District \_\_\_\_\_

/eh

### The Program

It is important that the demonstration day program be a representative portion of the normal education routine. Visiting educators do not want to view solitary moments of educational inspiration. They look for a sound program operating in a steady, functional manner--in the manner it operated yesterday and will operate the day after tomorrow.

In ERIE's experience, the elementary school principal first presented the demonstration day concept to his faculty, seeking the voluntary assistance of teachers involved in the process-oriented science curriculum. Once the school staff expressed a desire to provide leadership for the dissemination of information about the curricular innovation, the principal became coordinator of the day's activities.

Programs varied widely from school to school. Each teaching staff, of necessity, operated within the space, time, equipment, and personnel restrictions of their own schools. Where educational television apparatus and operators were available, the day's agenda provided for video tape viewing of selected segments of Science--A Process Approach instruction and evaluation. Where cadet teachers, flexible team teaching, and available substitute teachers could be called upon, visitors had longer periods in which

to question the classroom teacher. The demonstration day program schedule was organized around cafeteria peak loads, bus schedules, and sometimes the appearance of the school superintendent or a local college professor. Schools designed programs compatible with school physical conditions and respectful of on-going instruction. Several sample program schedules are included below.

One word of caution. Feedback (via questionnaires) from demonstration day visitors tended to underscore the impact of observation of classroom teaching and free verbal interchange with classroom teachers. Both formal presentations by "outside experts" and excessive participation by representatives of educational change agencies were downgraded. In other words, school people came to observe fellow school people and to converse with fellow school people. They did not come to be lectured at or to discuss theoretical frameworks for educational change. They came to see and to get the facts from teachers for whom the new curriculum was an everyday classroom reality.

## Sample Program 1

WESTMERE ELEMENTARY SCHOOL  
GUILDERLAND CENTRAL SCHOOLS  
December 10, 1968

8:30 - 8:45 AM		COFFEE.....CAFETORIUM		
8:45		WELCOME....James P. Cleary		Mr. Ebetino
- 9:15		+Schedule +Introduction		RSEC
9:15	J. McGrath (St. Rose) Rm 154	Video Tape Rm 159	Slide J. Schaefer Stage	J. Cleary, Principal Rm 102
9:45	Mrs. Dechene Gd 2 (Palmer)	James P. Cleary Principal Rm 102	Materials Outside 153	Miss Levine Gd 3 (Buchanan)
10:15	J. Cleary Principal Rm 102	J. McGrath (St. Rose) Rm 154	Miss Gadomski Gd 3 (Hammer)	F R E E (Buchanan)
10:45	Slide Proj J. Schaefer Stage	Mrs. Somerdin Gd 2 (Hall)	F R E E (Hammer)	J. McGrath (St. Rose) Rm 154
11:15	L U	F R E E (Hall)	J. Cleary Principal Rm 102	Materials Outside Rm 153
11:45	C H	L U	L U	Video Tape Rm 159
12:15	N	N	N	
12:15	Video Tape Rm 159	C H	C H	L U
12:45	Mrs. MacMurray Gd 1 (Bode)	Slide Proj J. Schaefer	Mrs. Bielefeld Kdg (Esmay)	C H
1:15	F R E E (Bode)	Materials Rm 153	J. McGrath (St. Rose) Rm 154	Mrs. Swanson Kdg (Martin)
1:45	Materials Rm 153	Mrs. Spohr Gd 3 (Mrs. Robinson)	Video Tape Rm 159	Slide Proj. J. Schaefer Stage
2:30	P A N E L	D I S C U S S I O N	FOR	Q U E S T I O N S:
-	Mr. Ebetino	ERIE	Mr. McGrath	Mrs. Parmenter
3:15	MR. CLEARY, Moderator		CAFETORIUM	

Program 1 (cont'd)

WESTMERE ELEMENTARY SCHOOL  
GUILDFIELD CENTRAL SCHOOLS  
December 11, 1968

8:30 - 8:45 AM		COFFEE.....CAFETORIUM		
8:45	WELCOME.... James P. Cleary	Mr. Ebetino	ERIE	
-	+Schedule	RSEC		CAFETORIUM
9:15	+Introduction			
9:15	J. Cleary Principal Rm 102	Mrs. Buchanan Gd 2 (Martin)	Video Tape Rm 159	Mrs. Robinson Gd 3 (Price)
9:45	Mrs. Parmenter Gd 3	Video Tape Rm 159	S L I D E P R E S E N T A T I O N J. Schaefer Stage	
10:15	F R E E (Levine)	Mrs. Bielefeld Kdg (Gadomski)	Mrs. Swanson Kdg (Hammer)	Video Tape Rm 159
10:45	Materials Outside Rm 153	F. R E E (Gadomski)	F R E E (Hammer)	J. Cleary Principal Rm 102
11:15	L U N	Materials Outside Rm 153	J. Cleary Principal Rm 102	L U N
11:45	C H	J. McGrath Rm 159	L U N	C H
12:15				
12:15	J. McGrath Rm 159	L U N	C H	Mrs. Dechene Gd 2 (Tweedie)
12:45	Mrs. Somerdin Gd 2 (Esmay)	C H	Materials Rm 153	F R E E (Tweedie)
1:15	S L I D E P R E S E N T A T I O N J. Schaefer Stage		Mrs. Spohr Gd 3	J. McGrath Rm 159
1:45	Video Tape Rm 159	J. Cleary Principal Rm 102	J. McGrath Rm 143	Materials Rm 153
2:30	P A N E L D I S C U S S I O N Mr. Ebetino ERIE Mr. McGrath	FOR Q U E S T I O N S: Mrs. Parmenter Mrs. Bielefeld		
3:15	MR. CLEARY, Moderator	CAFETORIUM		

**SAMPLE PROGRAM 2****SCIENCE--A PROCESS APPROACH****Demonstration and Dissemination****Calvin U. Smith Elementary School****March 27, 1969**

8:45 - 9:15 Registration and coffee - Cafetorium

9:15 - 9:25 Welcome and introduction of speaker

9:25 - 10:00 "The Process Approach" - Mr. Thomas Ahern  
Pilot School Principal  
Williamsville, N.Y.

10:00 - 10:45 Classroom visits to observe program

11:00 - 11:35 Film presentation Groups K-1-2A Library  
Mr. Doppelt  
2B-3-4 Conf. Room  
Mr. Watkins  
Miss Davis11:40 - 12:15 Film presentation Groups K-1-2A Conf. Room  
Mr. Watkins  
Miss Davis  
2B-3-4 Library  
Mr. Doppelt

12:20 - 1:00 Lunch (gym)

1:15 - 2:00 Classroom visits to observe program

2:10 - 2:40 Observe competency measure - Cafetorium  
Mrs. Hamilton

2:45 - 3:15 Teacher interviews

3:15 - Reaction session

Program 2 (Cont'd)

CALVIN U. SMITH ELEMENTARY SCHOOL  
S.A.P.A. OBSERVATION SCHEDULE  
March 27, 1969

Kindergarten Room #101 - Mrs. Hayes - Observing 7

A.M. - Perception of Odor - Introduction & Activity 1  
and 2

P.M. - Perception of Odor - Activity 3 and Generalizing  
Experience

Grade 1 - Observing 12 - Observing Color and Color Changes  
in Plants

A.M. - Room #103 - Mrs. Power - Introduction and Activity  
1

P.M. - Room #102 - Mrs. Paris - Activity 2 and Generalizing  
Experience

Grade 2 - Classifying 8 - The Color Wheel - An Order Arrangement

A.M. - Room #104 - Mrs. Hamilton - Activity 1 and 2

P.M. - Room #106 - Miss Davis - Activity 4

Grade 3 - Communicating 11 - Describing Locations

A.M. - Room #117 - Mrs. Bovee - Introduction and Activity  
1 and 2

P.M. - Room #115 - Mrs. DeSilva - Activity 3 and 4

Grade 4 - Defining Operationally 1 - Electric Circuit and Their  
Parts

A.M. - Room #114 - Mrs. Meyers - Introduction and Activity  
1

P.M. - Room #116 - Mr. LeRay - Activity 2

SAMPLE PROGRAM 3

TICONDEROGA ELEMENTARY SCHOOL  
Ticonderoga, New York  
DEMONSTRATION AND DIFFUSION DAY

8:30 - 9:00 Registration - Coffee - Large Group Instruction Room

9:00 - 9:15 Welcome by Mr. Simeon McIntyre

9:15 - 9:45 Group 1A  
Observe Mrs. Wiedenheft  
Lessons Group 1B  
Mrs. Bowers

Group 2A  
Mrs. Thompson  
Group 2B  
Mrs. Stevenson

Group 3A  
Miss Delorm  
Group 3B  
Mrs. Moore

Group 4A  
Mrs. McLean  
Group 4B  
Mrs. Martzinek

9:45 - 10:15 Groups 1A, 1B  
Conferences Vacant room in  
with Kindergarten  
Teachers

Groups 2A, 2B  
Large group  
Instruc. Room

Groups 3A, 3B  
Resource Center  
Science Room

Groups 4A, 4B  
Groups 3A, 3B  
Resource Center  
Science Room

10:15 - 10:45 Group 3A  
Observe Mrs. McDonald  
Lessons Group 3B  
Mrs. Clancy

Group 4A  
Miss Forcier  
Group 4B  
Mrs. Barber

Group 1A  
Mrs. Trainer  
Group 1B  
Mrs. Wood

Group 2A  
Mrs. Hendrix  
Group 2B  
Mrs. Valentine

10:45 - 11:15 Groups 3A, 3B  
Conferences Vacant room in  
with Kindergarten  
Teachers

Groups 4A, 4B  
Large Group  
Instruc. Room

Groups 1A, 1B  
Resource Center  
Science Room

11:15 - 12:00 Examine Kits in Science Room

12:00 - 1:00 Lunch in Cafetorium - Tickets may be purchased. 1st. corridor. Price, 35¢

1:00 - 1:35 Charles Mitchell - Large Group Instruction Room - Process Education

1:35 - 2:00 Questions: B. Confair - ERIE  
C. Mitchell - PSUC  
S. McIntyre - V. Prin.

D. Freneya - Kdn.  
B. Barber - 1st Gr.  
P. Delorm - 2nd Gr.  
J. Martzinek - 2rd Gr.

**SAMPLE PROGRAM 4****DEMONSTRATION DAY: SCIENCE--A PROCESS APPROACH**

J. Henry Cochran Elementary School, Williamsport, Pa.

March 6, 1969

9:00 - 9:25 Registration, Coffee (Cafeteria)

9:25 - 9:30 Words of Welcome - Dr. Clyde Wurster, Superintendent  
Williamsport Area School District

9:30 - 10:15 Overview of SAPA - Dr. Lester Kieft  
Professor of Chemistry  
Bucknell University

10:30 - 11:15 Sample Process Lessons  
Group I Mrs. Hoffman  
Group II Miss Wright

11:15 - 12:00 Reaction Session - Dr. Kieft, Miss Wright,  
Mrs. Hoffman

12:00 - 12:30 Local In-Service for SAPA - Mr. McCarthy  
Science Supervisor  
Williamsport Area Schools

12:30 - 1:00 Area J Involvement - Mr. Hoxie, Director, Area J,  
Title III Office,  
Lock Haven

1:00 - 2:00 Lunch 50¢ (Cafeteria)

2:00 - 2:45 Demonstration Lessons (Kindergarten through  
4th Grade)

2:45 - 3:15 Question and Answer Period -  
Mrs. Hoffman - Kindergarten  
Mrs. Gordon - First Grade  
Mrs. Rosser - Second Grade  
Miss Wright - Third Grade  
Mrs. Bower - Fourth Grade

T E N T A T I V E   S C H E D U L E

DIFFUSION DAY - SHAMOKIN AAAS WORKSHOP  
Friday, February 28, 1969

MORNING SESSION

Elks Lodge, 222 E. Independence, Shamokin, Pa.

9:00 - 9:30 Registration-Coffee-Survey  
of Relevant Materials.

9:30 - 11:30 Welcome and Introduction of  
Guests (Mr. Lyman Weaver).  
Demonstration and Rationale  
(Dr. Lester Kieft).

Explanation of Hierarchy  
Chart.

Discussion and Display of  
Equipment.

Movie of Washington School  
Teachers and Students.

11:40 - 12:30 Lunch.

Mr. Weaver - Principal,  
Washington School

Miss Ehret Teachers  
Miss Grow Science--  
Miss Savidge A  
Mrs. Pokorny Process  
Mrs. Shutt Approach

SAMPLE PROGRAM 5

AFTERNOON SESSION

Washington School, Shamokin, Pa.

1:00 - 1:30 Classroom Demonstrations  
by Teachers and Students  
Grades K-4.

1:30 - 2:00 Demonstrations of Testing  
Procedures by Teachers  
and Students - Grades  
K-4.

2:00 - 2:30 Panel Response to Parti-  
cipant Questions --

Dr. McIlwaine - ERIE  
Science Consultant

Dr. Kieft - Bucknell Univ.  
Science Dept. Chairman

**Sample Program 6**

**OVERLOOK ELEMENTARY SCHOOL**

**SCIENCE--A PROCESS APPROACH**

**DEMONSTRATION DAY**

**Wednesday, March 1, 1970**

**9:30 A.M.**

**Introductions**

**Dr. Fred Krause  
Assistant County Superintendent**

**General Orientation to S-APA  
and Its Role in Science Education**

**Mr. James Currie  
Assistant Professor of Education  
Duquesne University**

**Science--A Process Approach  
The Lesson Plan, Process Skills,  
and Sequential Development**

**Howard Robertson, Principal  
Overlook Elementary School**

**AN OUTLINE FOR DISCUSSION**

**THE ROLE OF EACH COMPONENT**

	<b>TEACHER</b>	<b>PUPIL</b>	<b>MATERIAL</b>
<b>Behavioral Objectives</b>			
<b>Activities</b>			
<b>Appraisal</b>			
<b>Competency Measure</b>			

Program 6 (cont'd)

## SCHEDULE FOR VISITATIONS

10:30	Kindergarten Mrs. Laslo Group A	Grade 1 Mrs. Breen Group B	Grade 2 Miss Quinette Group C	Grade 3 Mrs. Ross Group D	Grade 4 Mrs. Erbe Group E
11:15	May remain in room and talk to the teacher.	May view a competency measure being ad- ministered.	May go to the auditorium to talk with the teacher.	May remain in the room and talk to the teacher.	May remain in the room and talk to pupils.

During any free time in the schedule please survey the materials available in the auditorium. Read a complete lesson plan from a kit. Study the contents of some of the material boxes.

Have a cup of coffee in the kitchen.

Lunch on your own. See map included in your materials.

1:15	Kindergarten Miss Mentch Group C	Grade 1 Mrs. Kent Group D	Grade 2 Mrs. Pollak Group E	Grade 3 Mrs. Coulter Group A	Grade 4 Mr. Jaszcar Group B
	May go to the auditorium and talk with teacher and view competency measure.	May remain in room and view a competency measure being ad- ministered.	Talk to the pupils and go to the auditorium.	May remain in room and talk with pupils. Also view a com- petency measure.	May remain in room and talk with pupils.

## PANEL DISCUSSION \*\*\*\*\* QUESTION AND ANSWER PERIOD

2:30 -	Mr. Jaszcar	Mr. Sanford
	Mr. Robertson	Miss Gibson
3:50	Mrs. Pollak	

Thank you very much for attending. Perhaps we will have the opportunity of visiting your school district in the near future.

Participant Evaluation

Teachers and administrators visiting a school to examine a new curriculum in operation should be asked to evaluate the demonstration program. Candid comments by participants can lead to better organization and implementation of meetings in the future.

The Title III Centers which played a major role in the promotion of 14 demonstration days in 1968-69 generally assumed responsibility for the preparation of an evaluation form. The form was completed by visitors just prior to their departure from the demonstration school. Two such forms follow.

**SAMPLE EVALUATION FORM 1**

**CONFERENCE EVALUATION FORM**

Conference Date: Friday, February 28, 1969.

Place: Shamokin Area Schools - Washington School

THE VALUE OF THIS CONFERENCE IS IN THE QUALITY OF SERVICE AND/OR IDEAS IT PROVIDES YOU. TO HELP THIS CONFERENCE AND TO HELP IMPROVE UPON IT WHEN OTHER CONFERENCES ARE HELD, WE WOULD LIKE YOUR REACTIONS TO THE FOLLOWING:

1. Did the conference provide you with pertinent information or ideas that you might be able to implement?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

2. Did the conference add to the knowledge you already had of the area covered in the conference?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

3. Do you believe that this conference would be valuable to your peers in other parts of the state?

Yes	_____
No	_____

4. If the following provisions were made for the meeting, please rate their value overall.

a. Consultant(s)	Poor	_____
	Fair	_____
	Good	_____
	Excellent	_____

Evaluation Form 1 (Cont'd)

## 4. b. Materials

Poor	_____
Fair	_____
Good	_____
Excellent	_____

## c. Meeting format

Poor	_____
Fair	_____
Good	_____
Excellent	_____

## d. Classroom Observations

Poor	_____
Fair	_____
Good	_____
Excellent	_____

5. Would you recommend that your school send other staff members to another meeting of this type if it were offered?

Yes	_____
No	_____

6. Please rate the conference, in its totality, on the following nine point scale. (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor	Poor		Satisfactory		Good		Excellent	

7. Additional Comments:

---



---



---



---



---



---



---



---



---

**SAMPLE EVALUATION FORM 2**

NORTHEAST REGIONAL SUPPLEMENTARY EDUCATIONAL CENTER  
8 South Platt St. Plattsburgh, New York  
518-561-1231

Joseph E. Allen  
Regional Director  
\*

CONFERENCE EVALUATION FORM  
SCIENCE--A PROCESS APPROACH

Frederick D. Arce  
Associate Director  
\*

W. Harney Davey  
Associate Director

Conference Date: Tuesday, February 18, 1969

Place: Ticonderoga Elementary School

The value of this conference is in the quality of service and/or ideas it provides you. To help the Center assess this conference and to help improve upon it when other conferences are held, we would like your reactions to the following:

1. Did the conference provide you with pertinent information or ideas that you might be able to implement?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

2. Did the conference add to the knowledge you already had of the area covered in the conference?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

3. Do you believe that this conference would be valuable to your peers in other parts of the Region the Center serves?

Yes	_____
No	_____

Evaluation Form 2 (Cont'd)

5. Would you recommend that your school send other staff members to another meeting of this type if it were offered?

Yes \_\_\_\_\_  
No \_\_\_\_\_

6. Please rate the conference, in its totality, on the following nine point scale. (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor	Poor		Satisfactory		Good		Excellent	

7. To what extent did the conference meet your overall expectations? (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor	Poor	Satisfactory				Good	Excellent	

8. Additional Comments:

Evaluation Form 2 (Cont'd)

If yes, please suggest any changes we should incorporate next time.

---

---

---

---

If no, please suggest a substitute you have in mind.

---

---

---

---

(Use back of page if more space is needed.)

4. If the following provisions were made for the meeting, please rate their value overall.

a. Consultant(s)	Poor	_____
	Fair	_____
	Good	_____
	Excellent	_____
b. Materials	Poor	_____
	Fair	_____
	Good	_____
	Excellent	_____
c. Meeting space	Poor	_____
	Fair	_____
	Good	_____
	Excellent	_____
d. Meeting format	Poor	_____
	Fair	_____
	Good	_____
	Excellent	_____

Follow-Up Assessment

What happens in area schools after a demonstration day? An important evaluation task is to determine in how many classrooms in how many schools an innovative curriculum is introduced after being inspected and discussed by demonstration day participants. Data relevant to this question can be obtained through follow-up letters, telephone calls, personal visits to district central offices, careful scrutiny of the rosters for inservice education workshops, and even through conversation with regional salesmen for equipment vendors.

The Institute plans to investigate the number and size of new curriculum installations motivated, at least in part, by 1968-69 demonstration day activities. Extremely valuable data now exist from which the impact of on-site demonstrations may be inferred. For example, a number of Pennsylvania schools now part of ERIE's Demonstration School Network said they became convinced of the value of Science--A Process Approach after participating in demonstration day programs. Five schools in the Corning (N.Y.) area instituted trial Science--A Process Approach classrooms in 1969-70 as a result of the persuasive influence of Calvin U. Smith Elementary School teachers. ERIE organized and coordinated three large K-3 workshops for Science--A Process Approach aspirants during August, 1969. A large number of

teachers from schools in the 14 regions where demonstration days were conducted obtained registration fee funds from their districts and attended a full five days of process science inservice education.

OUTSIDE RESOURCES FOR A DEMONSTRATION DAY  
ON SCIENCE--A PROCESS APPROACH

A variety of outside resources exist which may prove helpful to the person responsible for planning and conducting a demonstration day for Science--A Process Approach. These resources are listed in sections below as follows: Agencies, 1968-69 Demonstration Day Schools, RAN Consultants, Sources of Handout Materials, and Bibliography.

Agencies

American Association for the  
Advancement of Science  
Commission on Science Education  
1515 Massachusetts Avenue, N.W.  
Washington, D.C. 20005  
John R. Mayor, Director

Eastern Regional Institute for Education (ERIE)  
635 James Street  
Syracuse, New York 13203  
James M. Mahan, Coordinator, Curriculum  
Installation Group  
Roger Ming, Associate Director, Regional  
Action Network

Regional Action Network  
(50 university professors trained by ERIE to  
assist schools in science education improvement  
efforts)  
Names and institutional addresses follow.

Regional Title III Center  
(In the local area)

Xerox Corporation  
Education Division SB  
600 Madison Avenue  
New York, New York 10022  
Steven Doppelt, New York Representative  
James McGrody, Pennsylvania Representative

1968-69 Demonstration Day Schools

Abraham Lincoln Elementary School  
1524 Hamilton Road  
Pittsburgh, Pennsylvania 15234  
Vance Sanford, Principal

Allegheny County Schools  
345 County Office Bldg.  
Pittsburgh, Pennsylvania 15219  
Fred C. Krause  
Assistant Superintendent

Calvin U. Smith Elementary School  
Stanton Street Extension  
Painted Post, New York 14870  
Donald Mahon, Principal

C.C. Ring Elementary School  
400 Buffalo Street  
Jamestown, New York 14701  
John Carlson, Principal

Fairview Elementary School  
45 Chestnut Street  
Fairview, Pennsylvania 16415  
William Straessley, Principal

F.S. Banford Elementary School  
State Street  
Canton, New York 13617  
Robert J. Meldrum, Jr., Principal

General E.S. Otis School #30  
36 Otis Street  
Rochester, New York 14606  
Alexander Johnson, Principal

J. Henry Cochran Elementary School  
1500 Cherry Street  
Williamsport, Pennsylvania 17701  
John E. Dice, Principal

Maple Elementary School  
1500 Maple Road  
Williamsville, New York 14221  
Thomas Ahern, Principal

## 1968-69 Demonstration Day Schools (cont'd)

Overlook Elementary School  
Meadowgreen Drive  
Pittsburgh, Pennsylvania 15236  
Howard Robertson, Principal

Shannock Valley Elementary School  
Rural Valley, Pennsylvania 16226  
Francis Helm, Principal

Ticonderoga Elementary School  
Alexandera Avenue  
Ticorderoga, New York 12883  
Mabel Hornburg, Principal

Trumansburg Elementary School  
Trumansburg No. 2  
Trumansburg, New York 14886  
John A. Bourdon, Principal

Washington Elementary School  
Sunbury Street  
Shamokin, Pennsylvania 17872  
Lyman Weaver, Principal

Wellsboro Elementary School  
Wellsboro, Pennsylvania 16901  
Mahlon Northrop, Principal

Westmere Elementary School  
Johnston Road  
Albany, New York 12303  
James Cleary, Principal

LIST OF RAN CONSULTANTS

NEW YORK

Adrien Adelman, Jr. State University College 329 Cassidy, 1300 Elmwood Buffalo, N.Y. 14208	Howard Litvack Adelphi University Garden City, N.Y. 11530	Ralph M. Watson, Jr. Cazenovia College Cazenovia, N.Y. 13035
Robert W. Boenig State University College Fredonia, N.Y. 14063	Richard E. McBride State University College Main Building 200A New Paltz, N.Y. 12561	Paul A. Young Canisius College Buffalo, N.Y. 14208
Harrie Caldwell Syracuse University 410 Lyman Hall Syracuse, N.Y. 13210	Eugene L. Chiappetta Syracuse University 410 Lyman Hall Syracuse, N.Y. 13210	Donald F. McFarland State University College Fredonia, N.Y. 14063
John E. Czarr Syracuse University 410 Lyman Hall Syracuse, N.Y. 13210	John F. McGrath College of St. Rose Albany, N.Y. 12203	John F. McGrath College of St. Rose Albany, N.Y. 12203
G. Raymond Fisk State University College Cortland, N.Y. 13045	Tom Fitzgibbons Keuka College Keuka Park, N.Y. 14478	Charles W. Mitchell State University College Education Research & Demonstration Center Plattburgh, N.Y. 12901
Colleen M. Gorman Keuka College Keuka Park, N.Y. 14478	John A. Glenzer State University College Old Main Fredonia, N.Y. 14063	Jerome J. Notkin Hofstra University Hempstead, N.Y. 11550
Frank Gray Briarcliff College Briarcliff Manor, N.Y. 10510	Harvey Inventsasch State University College Cortland, N.Y. 13045	Raymond T. O'Donnell State University College Oswego, N.Y. 13126
Lawrence J. Kiely Niagara University Niagara Univ., N.Y. 14109	Clarence R. Trexler State University College Oswego, N.Y. 13126	Ronald A. Larson Edinboro State College Room 225 Electronics Bldg. Edinboro, Pa. 16412
Anthony Lazzaro California State College California, Pa. 15419	Peter P. Libra Mercyhurst College 501 E. 38th Street Erie, Pa. 16501	Douglas R. MacBeth Gwynedd-Mercy College Gwynedd Valley, Pa. 19437
Richard F. Mason Mansfield State College Mansfield, Pa. 16933	Richard F. Mason Mansfield State College Mansfield, Pa. 16933	Daniel Overheim Edinboro State College Edinboro, Pa. 16412
Wayne Ransom Temple University Philadelphia, Pa. 19122	James D. Shofestall Clarion State College Clarion, Pa. 16214	Wayne Ransom Temple University Philadelphia, Pa. 19122
William Torop St. Joseph's College City Avenue at 54th Street Philadelphia, Pa. 19131	James F. Currie Duquesne University Pittsburgh, Pa. 15219	James D. Shofestall Clarion State College Clarion, Pa. 16214
Willian A. Uricchio Carlow College 3333 Fifth Avenue Pittsburgh, Pa. 15213	Jay Frank Davidson Shippensburg State College Box 508 Shippensburg, Pa. 17257	William A. Uricchio Carlow College 3333 Fifth Avenue Pittsburgh, Pa. 15213
Richard F. Waechter Indiana University of Pa. Indiana, Pa. 15701	Lester A. Gries, Jr. Wilson College Chambersburg, Pa. 17201	Richard F. Waechter Indiana University of Pa. Indiana, Pa. 15701
Paul R. Widick West Chester State College West Chester, Pa. 19380	M. Raymond Jamison Lycoming College Box 68 Williamsport, Pa. 17701	Paul R. Widick West Chester State College West Chester, Pa. 19380
Robert E. Ziegler Elizabethtown College Elizabethtown, Pa. 17022	Lester Kieft, Jr. Bucknell University Lewisburgh, Pa. 17837	Robert E. Ziegler Elizabethtown College Elizabethtown, Pa. 17022

### Sources of Handout Materials

1. Science--A Process Approach: Purposes, Accomplishments, Expectations. Prepared by Dr. Robert M. Gagné. (A 17-page booklet describing this process-oriented curriculum. Contains list of important references.) American Association for the Advancement of Science Miscellaneous Publication 67-12, September, 1967.
 

Suggestion: This booklet could be mailed to demonstration day registrants in advance of their school visitation. A reading prior to the visitation will place process-oriented instruction in context and stimulate a series of important questions.
2. How to Utilize the Services of a Science Consultant By Dr. Kenneth D. George. (A six-page article obtainable from the National Science Teachers Association, 1201 16th Street, N.W., Washington, D.C. 20036. How To Do It Pamphlet Series stock number 471-14286. (Cost: \$28 per copy for 10 or more copies.)
3. Science--A Process Approach: The Totally New Approach to Teaching Science in Grades K-6. A free, 15-page booklet prepared by the Xerox Corporation, the vendor officially approved by the American Association for the Advancement of Science as producer of Science--A Process Approach equipment. Xerox Education Division, 600 Madison Avenue, New York, New York 10022.
4. Price List: Science--A Process Approach (Prices for science kits and teacher guides per each grade level and associated order code numbers). Xerox Education Division, 600 Madison Avenue, New York, New York 10022.
5. Films of Science--A Process Approach Instruction. Films displaying process-oriented science instruction for various elementary school grade levels are available on a loan basis from the American Association for the Advancement of Science.
6. Miscellaneous reprints of articles on Science--A Process Approach. Available to ERIC affiliated schools for demonstration day activities.
7. Commission on Science Education Newsletter. Prepared by the American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005. (Published Periodically) Volume 5, Number 2, July 1969.

## BIBLIOGRAPHY

AAAS Commission on Science Education. Big difference between knowing and guessing. Grade Teacher, 1966, 83, 76-79.

. Newsletter, 1965-69, vols. 1-5.

. Process method of teaching science.

Grade Teacher, 1966, 83, 60-74.

. The psychological bases of Science--A Process Approach. 2nd ed. Washington, D.C.: AAAS, 1967.

. Science--A Process Approach: purposes, accomplishments, expectations. Washington, D.C.: AAAS, 1967.

Brakken, E.W. Meaning of process approach. Instructor, 1967, 76, 21.

Campbell, L. (Ed.) Science in the kindergarten and early grades. Science Education News, Nov. 1963.

DeRose, J.V. What does it mean to measure? Science and Children, 1967, 4, 35-37.

Gagné, R.M. Elementary science: a new scheme of instruction. Science, 1966, 151, 49-53.

Kurtz, E.B., Jr. Biology in Science--A Process Approach. American Biology Teacher, 1967, 29, 192-196.

Livermore, A.H. The process approach of the AAAS Commission on Science Education. Journal of Research in Science Teaching, 1964, 2, 271-282.

Livermore, A.H. AAAS Commission on Science Education: Elementary science programs. Journal of Chemical Education, 1966, 43, 270-272.

Mayor, J.R. Science and mathematics in the elementary school. The Arithmetic Teacher, 1967, 14, 629-635.

Science--A Process Approach. 4th experimental ed., Parts 6 & 7. Washington, D.C.: AAAS, 1967.

Science--A Process Approach. Commentary for teachers. Washington, D.C.: AAAS, 1965.

Science--A Process Approach. Parts A-E. New York: Xerox Education Division, 1967-68. (Parts F and A, 1970)

Science--A Process Approach. Process Hierarchy Chart.  
New York: Xerox Education Division, 1967.

Walbesser, H.H. Curriculum evaluation by means of behavioral objectives. Journal of Research in Science Teaching, 1963, 1, 296-301.

Walbesser, H.H. Science curriculum evaluation: observations on a position. The Science Teacher, 1966, 33, 34-39.

Walbesser, H.H. & Carter, H.L. Acquisition of elementary science behavior by children of disadvantaged families. Educational Leadership, 1968, 25 (8), 741-748.